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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,997	10/12/2004	Wolfgang Bremser	PAT-00361	6692
26922	7590	06/18/2007	EXAMINER	
BASF CORPORATION			SASTRI, SATYA B	
Patent Department				
1609 BIDDLE AVENUE			ART UNIT	
MAIN BUILDING			PAPER NUMBER	
WYANDOTTE, MI 48192			1713	
			NOTIFICATION DATE	
			DELIVERY MODE	
			06/18/2007	
			ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/510,997	Applicant(s) BREMSE ET AL.	
	Examiner Satya B. Sastri	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9, 13 and 26 is/are allowed.
- 6) ☒ Claim(s) 1-5, 10, 11 and 14-25 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's amendment filed on April 9, 2007. *Claims 1-26* are now pending in the application.
2. As pointed in the applicant's response, an incorrect Appl. No. was cited in paragraph 5, page 3 of office action dated Jan. 11 2007. Numbers of copending applications over which the provisional rejections were made were cited in paragraph 3 of the same office action.
3. In view of the amendment, rejection of claims 1-5, 14, 15, 16, 17, 18, 22, 23, 24, 25 under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. (US 5,118,727) and rejection of claims 4-6 under 35 U.S.C. 112, second paragraph as being indefinite are all withdrawn. However, provisional rejection of claims 1-5, 10, 11, 14-25 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of copending application 10/510,993 (amdt. dated 4/16/07, appl. published as US 2005/0182169 A1) to Stubbe et al. is sustained. In view of the amendment dated 10/16/06 of the copending claims, provisional rejection of claims 1-5, 10, 11, 14-25 over claims 13-18 of copending application 10/512,130 are withdrawn. Applicant's statement on page 1 of the amendment filed 4/9/07 regarding the provisional obviousness-type double patenting rejections is acknowledged. If the following double-patenting rejection is the only rejection remaining in this application and if there is a provisional obviousness-type double patenting rejection in the later-filed copending application, per USPTO practice, the examiner will withdraw the rejection.

Claim Objection

4. Claim 12 is objected to because of the use of phrase “can be prepared”. Such a limitation introduces indefiniteness into the claim language.

Previously Cited Statutes

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 2, 4, 5, 10, 11, 14, 15, 16, 17, 18, 22, 23, 24, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamo et al. (US 6,589,324 B2).

Prior art to Kamo et al. disclose agent for metallic coating surface comprising at least one aluminum salt and an inorganic oxide particle, a salt of a metal other than aluminum, a phosphorus compound and a resin (abstract). The resin component may be an acrylic resin containing hydroxyl and/or carboxyl groups so as to disperse the resin in an aqueous solvent (col. 7, lines 22-30, 53-567 and col.8, lines 1-24).

The aluminum-containing inorganic oxide particle has an average particle size ranging from 1-20 nm and the amount of such particles may range from 2-80 parts by wt. per 100 parts of resin (col. 17, lines 24-67). It is an inorganic oxide surface treated with an aluminum compound

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The solvents usable are aqueous solvents and solvents compatible with water. Disclosed solvents include propanol and iospropanol (col. 18, lines 38-42). The agent preferably has a pH of 1.5-3.5 (col. 18, lines 54-57).

The prior art does not (a) exemplify coating agents comprising all at least one swellable polymer and/or oligomer with ionic or potentially ionic groups, surface modified and cationically stabilized inorganic particles and an amphiphile.

The prior art discloses a resin comprising hydroxyl and/or carboxyl groups, water compatible solvents such as propanol and iospropanol, a pH of 1.5-3.5 and inorganic oxide nanoparticles surface treated with an aluminum compound. In light of the prior art teachings, it would have been obvious to a skilled artisan to include the various components and thereby arrive at the presently cited claims.

Given that the compositions are obvious as set forth in the rejection above, the properties recited in claims 4 and 5 must be intrinsic to the compositions.

With regard to claim 11, it is noted the newly added limitation does not necessarily limit the parent claims because the presence of non-ionic functional group is not mandatory in the parent claim on which it depends.

7. Claims 1-5, 10, 11, 14-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kambe et al. (US 6,599,631 B2).

Kambe et al. disclose inorganic particle/polymer composites. The polymeric component comprises side groups that can bond to inorganic particles (abstract, col. 5, lines 31-46). The compositions can be used can be used in solution/dispersion form (col. 22, lines 22-25). Suitable

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polymers include polyimides, polyamides, polyacrylamides, polyacrylonitrile, polyacrylic acid, polyvinyl alcohol etc. The polymers can inherently include functional groups, or can be modified to include desired functional groups or copolymerized with monomers to introduce the functional group (col. 11-12, bridging paragraph). For bonding in acrylic polymers, a portion of the polymers can be formed from carboxylic acid (col. 13, lines 20-26). Thus, the disclosure teaches the anionic or potentially anionic polymeric component as recited in instant claims.

The compositions further include inorganic particles with an average diameter of 2-400 nm (col. 15, lines 25-32, col. 17-18). The nanoparticles may be surface modified with an alkoxy silane which can hydrolyse and bond with the particles (col. 14, lines 6-21). Thus, the disclosure teaches surface modified cationically stabilized inorganic nanoparticle as recited in instant claims.

The liquid dispersion of inorganic particles may be in water, organic solvents such as alcohols, hydrocarbons and combinations there of (col. 19, lines 32-36). The dispersant of the nanoparticles should be selected to be compatible for the formation of well dispersed particles. Gamma alumina particles are dispersed well at acidic pH values of about 3-4, TiO₂ particles at a pH near 7 (col. 19, lines 40-45)

The prior art is silent with regard to the use of amphiphiles in the compositions.

The prior art teaches that for compatibility and formation of well dispersed particles, hydrophobic inorganic particles can be dispersed in nonaqueous solvents or aqueous solvents with less polar cosolvents (col. 19, lines 48-51). Given this teaching, and given that the dispersants may be selected from water or mixtures of water and alcohol, it would have been obvious to one

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of ordinary skill in the art to include amphiphiles, which are essentially less polar cosolvents than water, and thereby arrive at the presently cited claims.

With regard to claim 2, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant concentrations through routine experimentation depending upon the end use of the product.

Given that the compositions are obvious as set forth in the discussion above, the properties recited in claims 4, 5 must be intrinsically present in them.

With regard to claim 11, it is noted that the limitation concerning nonionic hydrophilic functional group is only an alternative component in the parent claim on which it depends.

The compositions may be used to coat electrodes and electrical components (col. 26-27).

Allowable Subject Matter

8. Claim 12 would be allowable upon overcoming the objection discussed in paragraph 4 above.

Claims 6-9, 13, 26 are allowed. Instant claims are allowable over prior art to Roberts et al. (US 5,118,727) and Komoto et al. (US 6,022,919). Neither art of record discloses aqueous dispersions comprising copolymers recited in the instant claims.

Future Correspondence

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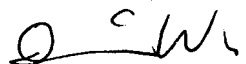
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri whose telephone number is 571-272-1112. The examiner can be reached on Wednesdays and Fridays, 7AM-5PM.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communications. The unofficial direct fax phone number to the Examiner's desk is 571-273-1112.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SATYA SASTRI

June 8, 2007


DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700